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Application No. 03 700 823.2 - 2115	Ref. TP103135UH	Date 26.02.2009
Applicant VALTION TEKNILLINEN TUTKIMUSKESKUS		

### Communication pursuant to Article 94(3) EPC

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(2) EPC.

You are invited to file your observations and insofar as the deficiencies are such as to be rectifiable, to correct the indicated deficiencies within a period

**of 4 months**

from the notification of this communication, this period being computed in accordance with Rules 126(2) and 131(2) and (4) EPC. One set of amendments to the description, claims and drawings is to be filed within the said period on separate sheets (R. 50(1) EPC).

**Failure to comply with this invitation in due time will result in the application being deemed to be withdrawn (Art. 94(4) EPC).**



Barrère, Matthieu  
Primary Examiner  
**For the Examining Division**

Enclosure(s): 4 page/s reasons (Form 2906)  
D4: WO 03054023 A1

The examination is being carried out on the **following application documents**:

**Description, Pages**

1-14 as published

**Claims, Numbers**

1-16 as published

**Drawings, Sheets**

1/1 as published

Reference is made to the following documents; the numbering will be adhered to in the rest of the procedure:

D1: EP-A1-0 402 707

D2: US-A-2 134 825

D3: DE 198 35 688 A1

The following document was found in a search of the state of the art in accordance with Article 54(3) EPC. A copy of the document is annexed to the communication and the numbering will be adhered to in the rest of the procedure:

D4: WO 03054023 A1 (2003-07-03)

**A) NOVELTY AND INVENTIVE STEP**

**A.1. Independent claim 1**

Document D1 discloses a method for manufacturing cellulose carbamate (see D1, example 5) comprising the steps of:

i) absorbing sodium hydroxide corresponding to the auxiliary agent of present claim 1 and urea into cellulose

ii) reacting the cellulose with urea in a mixture containing cellulose, sodium hydroxide, water corresponding to the liquid according to claim 1 and urea.

Before step ii), the slurry of example 5 is filtered which implies that the liquid content in the mixture must be less than 40%. Even if this was not the case, the evaporation of part of the water during the reaction would lead to the presence of a mixture as set out in independent claim 1.

Document D2 discloses a method for manufacturing cellulose carbamate (see D2, example 1) comprising the steps of:

i) absorbing sodium hydroxide corresponding to the auxiliary agent of present claim 1 and urea into cellulose

ii) reacting the cellulose with urea in a mixture containing cellulose, sodium hydroxide, water corresponding to the liquid according to claim 1 and urea.

Before step ii), the slurry of example 1 is pressed to obtain a press ratio of 2,1 (1,1 part of liquor for 1 part of dry pulp). Since the liquor contains about 55 % of water, it means that the mixture contains about 29% of water corresponding to the liquid content as set out in independent claim 1.

**The subject-matter of claim 1 is therefore not new over D1 and D2 (Article 52(1), 54(1) and (2) EPC).**

PCT application No. WO 03054023 A1 (D4) published on 03-07-2003 claims the priority date of 20-12-2001. It has been supplied to the European Patent Office in one of its official languages according to Article 153(3) and (4) EPC and the filing fee provided for in Rule 159(1)(c) EPC or Article 39(1) PCT has been paid. The requirements of Rule 165 EPC are thus fulfilled.

Its content as filed is therefore considered to be comprised in the state of the art relevant to the question of novelty, pursuant to Article 54(3) EPC.

This earlier document D4 discloses a method for manufacturing (see D4, example 3) comprising the steps of:

i) absorbing sodium hydroxide corresponding to the auxiliary agent of present claim 1 and urea into cellulose

ii) reacting the cellulose with urea in a mixture containing cellulose, sodium hydroxide, water corresponding to the liquid according to claim 1 and urea.

Before step ii), the slurry of example 3 is centrifuged which implies that the liquid content in the mixture must be less than 40%. Even if this was not the case, the evaporation of part of the water during the reaction would lead to the presence of a mixture as set out in independent claim 1.

**Thus, D4 is prejudicial to the novelty of the subject-matter of claim 1 of the present application (Article 54(3) EPC).**

In D3, no auxiliary agent such as sodium hydroxide or hydrogen peroxide is used to prepare the cellulose carbamate.

The subject-matter of claim 1 is therefore new over D3.

#### A.2. Dependent claims 2-14

Dependent claims 2-14 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC with respect to novelty and/or inventive step, the reasons being as follows:

The subject-matter of said claims appears to be either known from or directly derivable from the available prior art, or the application as filed appears not to contain any beneficial, surprising or unexpected results originating from any distinguishing feature which would support any inventive activity.

#### B) CLARITY (Article 84 EPC)

B.1. Claim 4 does not meet the requirements of Article 84 EPC in that the matter for which protection is sought is not defined. The claim attempts to define the subject-matter in terms of the result to be achieved: "method ... characterized in that the absorption ... is **enhanced**". Such a definition is only allowable under the conditions elaborated in the Guidelines C-III, 4.10. In this instance, however, such a formulation is not allowable because it appears possible to define the subject-matter in more concrete terms, viz. in terms of how the effect is to be achieved (see for instance the second part of claim 4).

B.2. The vague and imprecise statement "inventive idea" in the description on page 14 implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in a lack of clarity of the claims (Article 84 EPC) when the description is used to interpret the claims (see Guidelines C-III, 4.4). This statement should therefore be amended to remove this inconsistency.

#### C) CONCLUDING REMARKS

If the applicant intends to file a new set of claims, he is asked to take into consideration the following remarks:

C.1. To meet the requirements of Rule 42(1)(b) EPC, document D1 should be identified in the description.

C.2. In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant should clearly identify the amendments made, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages of the application as filed on which these amendments are based (see Guidelines E-II, 1).